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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,867	10/29/2007	Urs Burckhardt	128131	5954

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EXAMINER	
WALTERS JR, ROBERT S	

ART UNIT	PAPER NUMBER
1711	

NOTIFICATION DATE	DELIVERY MODE
07/15/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/582,867	BURCKHARDT, URS	
	Examiner	Art Unit	
	ROBERT S. WALTERS JR	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-16 and 20-32* is/are pending in the application.

4a) Of the above claim(s) *20-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,9 and 14-16* is/are rejected.

7)☒ Claim(s) *6-8 and 10-12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

Claims 1-12, 14-16 and 20-32 are pending. Claims 20-32 are withdrawn. Claims 1-12 and 14-16 are presented for examination.

Response to Arguments

Applicant's arguments, see amendment, filed 4/28/2010, with respect to the rejections over Parrinello have been fully considered and are persuasive. The rejections over Parrinello have been withdrawn.

Applicant's arguments filed 4/28/2010, with respect to the rejections over Okuhira have been fully considered but they are not persuasive. The applicant argues that substituting an alkyl chain of 10 carbon atoms or greater in place of Okuhira's chains of 1-6 carbon atoms, would not have been obvious. The applicant argues that an aldiminoalkylsilane having a 10 carbon atom chain would not have the same or nearly identical properties to one of 6 carbon atoms, as the examiner has alleged. The applicant points to examples from the specification to support their argument. However, these examples are comparing aldiminoalkylsilanes having short chain aldimines with aldiminoalkylsilanes where the aldimines are not substituted with simple alkyl chains of 10 or greater carbon atoms. Therefore, the examples in the specification do not provide evidence that aldiminoalkysilanes having a 10 carbon atom chain would have different properties than one having a 6 carbon atom chain. Thus, absent evidence to the contrary, the examiner maintains it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Okuhira's aldiminoalkylsilanes by utilizing alkyl chains of at least 10 carbon atoms.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-5, 9 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okuhira et al. (EP 0985693).

I. Regarding claims 1-5 and 9, Okuhira teaches aldiminoalkylsilanes (see Formula 13, page 13) prepared from the reaction of 3-aminopropyltrimethoxysilane (see Formula 5, page 10), or 3-aminopropyldimethoxymethylsilane (see Formula 9, page 10) with an aldehyde similar to that of Formula II (see Formula 2, page 8), wherein both Y^1 and Y^2 can be methyl (see page 8, lines 1-

16) and Y^3 is an alkyl of 1 to 6 carbon atoms. Okuhira fails to teach an aldiminoalkylsilane where Y^3 is an alkyl chain of at least 10 carbon atoms. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Okuhira's aldiminoalkylsilanes by utilizing alkyl chains of at least 10 carbon atoms. One would have been motivated to make this modification as the simple substitution of an alkyl chain of 10 carbon atoms would be expected to provide an aldiminoalkylsilane having the same or nearly identical properties to an aldiminoalkylsilane of 6 carbon atoms, absent evidence to the contrary. Further, one could have made this substitution with a reasonable expectation of success (as the substitution would not have been expected to alter the reactivity), and the predictable result of providing an aldiminoalkylsilane bearing the same properties.

II. Regarding claims 14 and 15, Okuhira teaches all the limitations of claim 1 (see above), including reacting an aminoalkylsilane of formula I with an aldehyde of formula II (see above), wherein the aldehyde is employed stoichiometrically to the amine groups of the aminoalkylsilane (0078). Okuhira further teaches a reaction of an aliphatic amine with a ketone to provide a ketoimine, wherein the water formed in the reaction is substantially removed from the reaction mixture azeotropically (0137). Okuhira fails to explicitly teach an embodiment where the water is removed completely from the reaction mixture of an aminoalkylsilane of formula I and an aldehyde of formula II. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Okuhira's process by substantially completely removing water generated in the reaction mixture. One would have been motivated to make this modification as this is a reaction which is an equilibrium reaction and water is produced as one

of the products of the reaction. Therefore, the removal of water from the reaction mixture, would shift the equilibrium to produce more products thereby driving the reaction to completion.

2. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okuhira in view of Merger et al. (U.S. Pat. No. 4853454).

Regarding claim 16, Okuhira teaches all the limitations of claim 14, but fails to teach the aminoalkylsilane being present in a mixture of at least one polyamine having primary aliphatic amino groups and the aldehyde groups employed stoichiometrically or in excess of the entirety of the primary amino groups, thereby producing a mixture after reaction. However, Merger teaches that aldehydes of formula II (see top of column 9) can be utilized in reactions with polyamines having primary aliphatic amino groups (see Table 1, columns 15 and 16) to prepare polyaldimines for use in moisture curable coating compositions. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Okuhira's method by adding polyamines having primary aliphatic amino groups and adding excess aldehyde to react with these additional polyamines to provide a mixture of aldiminoalkylsilane and polyaldimines. One would have been motivated to make this modification as Merger teaches that compositions incorporating the polyaldimines have increased storage stability (column 9, lines 12-14) and an acceleration in the curing reaction (column 1, lines 33-35).

Allowable Subject Matter

Claims 6-8 and 10-12 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest aldiminoalkylsilanes that would have the structure of the aldiminoalkylsilanes of claims 6 and 7, which would have ether and ester groups incorporated into the aldiminoalkylsilanes. Furthermore, a thorough search of the prior art failed to teach or suggest aldiminoalkylsilanes having this structure. Therefore, claims 6 and 7 are not obvious over the prior art of record. Claims 8 and 10-12 depend from claim 7 and are therefore also patentable over the prior art of record.

Conclusion

Claims 1-12, 14-16 and 20-32 are pending.

Claims 20-32 are withdrawn.

Claims 1-5, 9 and 14-16 are rejected.

Claims 6-8 and 10-12 are objected to.

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is (571)270-5351. The examiner can normally be reached on Monday-Thursday, 9:00am to 7:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Barr/
Supervisory Patent Examiner, Art Unit 1711

/ROBERT S. WALTERS JR/
July 9, 2010
Examiner, Art Unit 1711